

Weekly Report

2nd – 7th Jan 2018

Done:

1. Discussion on the revision of tvcg. We revise the sophistication measure again, and re-ran the model. The new sophistication now is PCA on A_i , B_i , C_i .
However, we found the visualization result of new measure is quite different from the previous one. It may be caused by the highly-skew distribution of data. Now we try to transform the data.
2. Wrote the majority of cover letter. The remaining part will be finished after the case is done.
3. Watched the video on YouTube: [Learn full -stack JavaScript Development: MongoDB, Node and React](#). It's a comprehensive and systematic series of videos which teach you how to build a system. It covers what we need and we will build based on it.
4. In the prototype system, one visual summary and one visual comparison component are required. We are considering like reeb graph, storyline, storygraph.
Besides, the satellite data reveals much uncertainties and we shall visualize them explicitly. These two designs will be determined next week.
5. Try to look for some recommendation paper, but find most of them can't be applied to our scenario.

To Do:

1. The system, backend database + basic layout, design and implementation. (discussion on Monday first).
2. Finish the TVCG case study. Find out and correct language issues.
3. A more detailed plan for submission.

Papers:

Understanding hotspots: a topological visual analytics approach Ross 那边的文章, 用了拓扑学上的 reeb graph 结合时空上的 KDE 展现 hotspot 的演变过程. 粗看其 reeb graph 投影的效果很类似于 storyline 的感觉(但是这个 graph 可以调节参数); 若和地图结合起来, 会更好的看到演变效果. 但是若事件太多可能就不好看了. 我们的原型系统需要一种类似的东西来统领这个

OntoVis: A visual analytics tool for understanding large heterogeneous social networks 很老的文章, 用到了一点 ontology 的概念. 它有一个大尺度的异构信息图的 abstraction graph (其实就类似于之前看的异构信息网络 HIN 的 metapath/metagraph)来指导用户做选择, 通过这个摘要图与对应的交互, 可以理清用户的思路, 发现一些潜在的规律诸如共现等; 同时显著地减少视觉上的混乱.

安排表

内容	DDL	Milestone
该论文	最最差月底	重新理 Case

前后端学习与实现	按暂时计划是 21	设计上已有了图纸，继续讨论；实现同步进行
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